CS 275
Exam 1
Tuesday, March 13

A. Basic scheme functions: car, cdr, cons, append, lambda, if, cond, let, letrec, etc.
B. Map and Apply
C. Foldr and Foldl
D. Unrestricted lambdas
E. Recursions in flat lists and recursions on structured lists
F. Tail-recursion, Accumulator-Passing Style, Continuation-Passing Style
G. Representing data structures with lambdas
H. Representing data structures with lists
I. How Lets, Lambdas and Applications are evaluated.
J. State and set!

Unlike most CS exams for classes above 150, a lot of the exam will involve coding: Write a Scheme function to do thus and so. You should also be prepared for some conceptual questions: such as What does a lambda expression evaluate to, and why?

Note that the 2016 exam I will post did not cover the two Passing styles in (F). Ours will and there is a good chance it will ask you to write a function in Continuation-Passing Style. In 2016 we used a function fold, which we defined in class. That was essentially the same as foldr.